

specimens of *Helops aereus* began to move about on the cards, trying to free their legs from the nearly dry shellac. Some chloroform poured into the box helped the poor creatures into a better existence. This tenacity of life is remarkable, as none of the other beetles, after having been in the alcohol for some three hours, were found to be alive. There must be a sort of respiratory receptacle under the elytra, analogous to that of certain water-beetles.

C. F. Gissler, Brooklyn, N. Y., May 7th, 1876.

BIBLIOGRAPHICAL RECORD.

Authors and Societies are requested to forward their works to the Editor at the earliest date possible. We ask our readers to inform us of the publication especially of those works which are not generally consulted by entomologists.

B. Pickman Mann.

(Continued from page 176.)

Nos. 533 and 534 are from the **Can. Entom.**, vol. vii (cont.).

* 533. F. B. CAULFIELD. List of Sphingidæ and Zygænidæ occurring on the Island of Montreal, P. Q. p. 241-242. Enumerates 28 species, with notes on abundance and seasons.

* 534. C. W. PEARSON. Excursion of the Montreal Branch to Chateauguay Basin, on Dominion Day. p. 242-244. Itinerary; list of 32 Lepidoptera taken June 30 and July 1, 1875.

* 535. The **Fourth Annual Report of the Secretary of the State Pomological Society of Michigan, 1874.** By Authority. Lansing, 1875, contains the following, and Nos. 536 to 538.

a. Need of greater attention to economic entomology (by G. Parmelee), 11-12. b. *Aegeria exitiosa*, pp. 31, 560; *Conotrachelus nenuphar*, pp. 35-36, 38-39, 237-240, 482-483, 491; *Carpocapsa pomonella*, pp. 69-70, 104, 106, 484, 533, 535, 547; *Doryphora 10-lineata*, pp. 71, 74; *Phylloxera vastatrix*, p. 72; *Ellopiæ ribearia*, p. 74; *Nematus ventricosus*, pp. 379-380, 559-560; orchard enemies, pp. 74, 486, 489, 490-491, 559-560; means against these and other injurious insects.

[In correction of Rec., No. 108 a, Prof. Cook writes: "I am not State Entomologist, but am Prof. of Entomology here [Lansing] and an officer of the Pom. Society, and so do what work my time as teacher will permit."]

* 536. A. J. COOK. The Codling Moth. p. 152-160.

Habits, seasons, description and enemies of *Carpocapsa pomonella*; means against it.

* 537. A. J. COOK. Economic Entomology. Its History, Progress, and needs in the United States. p. 176-183.

Notice of the labors of Harris, Fitch, Walsh, Riley, LeBaron, Packard.

Glover, and of societies and colleges; investigations which need to be made. (Abstract, p. 546-547.)

* 538. A. J. COOK. Grape Phylloxera. p. 341-350, fig. 1-5.

History, habits and forms of *Phylloxera vastatrix*; means against it. (Abstract, p. 556.)

* 539. A. J. COOK. Injurious Insects of Michigan. [From Report of State Board of Agriculture for 1874.] 8vo. pamphlet. pg. 48, fig. 1-47.

INSECTS INJURIOUS TO THE FARM, GARDEN, AND ORCHARD. Summary account of *Doryphora 10-lineata*, *Agrotis subgothica*, *A. Cochranii*, *Lachnosterna fusca*, *Bruchus pisi*, *Coreus tristis*, *Macrosila 5-maculata*, *Haltica striolata*, *Pieris rapae*, *Lytta cinerea*, *L. atrata*, *Diabrotica vittata*, *Carpocapsa pomonella*, *Saperda candida*, *Chrysobothris femorata*, *Mytilaspis conchiformis*, *Bostrichus bicaudatus*, *Elaphidion parallelum*, *Anisopteryx vernata*, *Clisiocampa Americana*, *Hyphantria textor*, *Conotrachelus nenuphar*, *Aegeria exitiosa*, *Selandria cerasi*, *Nematus ventricosus*, *Abraxas ribearia*, *Macroductylus subspinosus*, *Erythroneura vitis*, *Phylloxera vastatrix*, with figures, and of *Melittia cucurbitae*, *Agrotis devastator*, *Anthomyia raphani*, *Tomicus liminaris*, *Aphis* spp., *Aegeria tipuliformis*, *Tinea flavifrontella*; means against them.

* 540. The **Proceedings of the California Academy of Sciences**, vol. v, contain the following, and Nos. 541 to 553.

a. Remarks on Manna and Honey-Dew [occurrence of these substances in the San Joaquin Valley; attempt to account for them; their use by bees] (by John Applegarth), p. 42-43.

* 541. HENRY EDWARDS. Notes on the Honey-Making Ant of Texas and New Mexico, *Myrmecocystus Mexicanus* of Westwood. p. 72-75.

Description of the nest, the three kinds of individuals, and the method of obtaining food.

* 542. JAMES BLAKE, M.D. On the structure of the Honey-bag in the Honey-making Ant *Myrmecocystus Mexicanus*. p. 98.

* 543. H. EDWARDS. Pacific Coast Lepidoptera.—No. 1. Description of some new or imperfectly known Heterocera. p. 109-113.—Also separate. 8vo. pg. 5.

Describes *Sphinx perelegans*, *S. oreodaphne*, *S. Vancouverensis*, *Pseudalyptia* (n. g. Zygaenidae), *Ps. Crotchii*, *Ctenucha Walsinghamii*, *Epialus modestus* = 1 n. g., 6 n. spp.; re-describes *Sphinx Sequoiae*.

* 544. H. EDWARDS. Pacific Coast Lepidoptera.—No. 2. On the Transformation of the Diurnal Lepidoptera of Cali-

fornia and the adjacent districts. p. 161-172.—Also separate. 8vo. pg. 12.

Original and compiled descriptions of all the larvæ and pupæ of species belonging to the Pacific Coast, with which entomologists are at present acquainted, viz.: *Papilio Philenor* larva and pupa, *P. Zolicaon* l. & p., *P. Asterias* l. & p., *P. Eurymedon* l. & p., *P. Rutulus* p., *Neophasia menapia* p., *Colias eurytheme* l. & p., *Terias nicippe* l. & p., *Danais Archippus* l. & p., *Melitæa chalcedon* l. & p., *M. Editha* l. & p., *M. palla* l. & p., *Phyciodes mylitta* l. & p., *Grapta satyrus* l. & p., *G. zephyrus* l. & p., *Vanessa antiopa* l. & p., *V. Milberti* l. & p., *Pyrameis Huntera* l. & p., *P. Cardui* l. & p., *P. Atalanta* l. & p., *Junonia coenia* l. & p., *Limnitis Lorquini* p., *L. Californica* p.; food-plants, seasons.

* 545. H. EDWARDS. Pacific Coast Lepidoptera.—No. 3. Notes on some Zygenidæ and Bombycidæ of Oregon and British Columbia; with descriptions of New Species. p. 183-190.—Also separate. 8vo. p. 13-20 (appended to No. 2).

Describes *Scepsis Matthewi*, *Sarrothripa Columbianâ*, *Lithosia candida*, *Clemensia irrorata*, *Orgyia badia*, *Cymatophora improvisa* = 6 n. spp.; notes on habits and geographic distribution of about twenty species.

* 546. H. EDWARDS. Pacific Coast Lepidoptera.—No. 4. Descriptions of some New Genera and Species of Heterocera. p. 264-267.—Also separate. 8vo. pg. 4.

Describes *Spilosoma* (*Diaphora*, St.) *pteridis* larva, pupa and imago, *Epiplus Mathewi*, *Thauma* (n. g. Bombycidae), *Th. ribis*, *Stretchia* (n. g. Notodontidae), *S. plusiæformis* = 2 n. gen., 4 n. spp. [See Rec., No. 550].

* 547. H. EDWARDS. Pacific Coast Lepidoptera, No. 5 — On the Earlier Stages of some Species of Diurnal Lepidoptera. p. 325-332.—Also separate. 8vo. pg. 8.

Describes the known earlier stages of *Papilio Daunus*, *Pieris protodice*, "*Anthocaris ausonides*," *Colias caesonia*, *Terias lisa*, *T. delia*, *Danais Berenice*, *Agraulis vanillae*, *Argynnis myrina*, *Pyrameis carye*, *Limnitis misippus*, *L. Lorquini*, *Thecla halesus*, *Th. arsace*, *Th. mopsus*; says "I believe that the present and previous articles will be found to contain all the knowledge we possess concerning the earlier stages of our diurnal Lepidoptera." [See Rec., No. 544.]

* 548. H. EDWARDS. A Tribute to the Memory of George Robert Crotch: p. 332-334.—Also separate. 8vo. pg. 2.

* 549. H. EDWARDS. Pacific Coast Lepidoptera, No. 6.—Notes on the Earlier Stages of *Ctenucha Multifaria*, Boisduval. p. 344-345.—Also separate. 8vo. pg. 2.

Describes egg, young larva, pupa, cocoon and habits.

* 550. H. EDWARDS. Pacific Coast Lepidoptera, No. 7.—
Descriptions of some New Species of Heterocera. p. 365–367.
—Also separate. 8vo. pg. 3.

Describes *Epialus Tacomae*, *Halesidota Davisii*, *Heterocampa* (?) *conspecta* = 3 n. spp.; synonymy of *Antarctia vagans*, including *Spilosoma pteridis*, described above, p. 264, and of *A. rufula*.

* 551. H. EDWARDS. Pacific Coast Lepidoptera, No. 8.—
On the Transformations of some species of Heterocera, not
previously described. p. 367–372.—Also separate. 8vo. pg. 6.

Describes egg and larva of *Phryganidia californica*, larva, pupa and cocoon of *Clisiocampa constricta* Stretch, n. sp., young larva of *Leucarctia acrea*, larva and pupa of *Halesidota sobrina*, *H. argentata*, *Pyrrharctia Isabella*, *Platysamia ceanothi*, *Choerodes aegrotata*, pupa of *Gastropacha* sp. (“*betulifolia*?”), larva of the same (?); seasons; habits.

* 552. H. EDWARDS. Pacific Coast Lepidoptera, No. 9.—
Description of a New Species of *Thyris*, from the Collection of
Dr. Hermann Behr. p. 413.—Also separate. 8vo. pg. 1.

Describes *Thyris montana* n. sp., from Colorado.

* 553. H. EDWARDS. Pacific Coast Lepidoptera, No. 10.
—On a New Species of *Papilio* from California. p. 423–425.
—Also separate. 8vo. pg. 3.

Describes *P. Pergamus* n. sp.; gives a synoptical table of seven species, with synonymical notes. [In the separates, for “spotted,” before *P. Zolicaon*, read “black, with yellow lateral line;” for “with yellow lateral line,” before *P. Aliaska*, read “with black dorsal line.”]

Nos. 554 to 557 are separate issues from the **Proc. Cal. Acad. Sci.**, vol. vi. 8vo. pg. 29.

* 554. H. EDWARDS. Pacific Coast Lepidoptera, No. 11.
—List of the Sphingidæ of California and adjacent Districts,
with Descriptions of New Species. p. 1–8.

Describes *Hemaris rubens*, *H. cynoglossum*, *Proserpinus Terlooii* = 3 n. spp.; re-describes *Arctonotus lucidus*, *Proserpinus Clarkiae*; describes a new variety (*S. pallidulus*) of *Smerinthus ophthalmicus* and a new variety (*S. occidentalis*) of *S. modestus*; enumerates 24 species, with notes.

* 555. H. EDWARDS. Pacific Coast Lepidoptera.—No. 12.
On some New Species of Noctuidæ. p. 9–16.

Describes *Anarta Kelloggii*, *A. crocea*, *Melicleptria venusta*, *M. vacciniæ*, *M. fasciata*, *M. oregonica*, *Heliolithis Crotchii*, *Axenus ochraceus*, *A. amplus*, *Annaphila arvalis*, *A. lithosina*, *A. amicula*, *A. germana*, *A. domina*, *A. superba* = 15 n. spp.

* 556. H. EDWARDS. Pacific Coast Lepidoptera, No. 13.
—On the Earlier Stages of *Vanessa Californica*. p. 17–20.

Describes young and old larvæ and the chrysalis; habits, food-plant (*Ceanothus thyrsiflorus*); notes on abundance and transformations.

* 557. **H. EDWARDS.** Pacific Coast Lepidoptera, No. 14. —Notes on the Genus *Catocala*, with Descriptions of New Species. p. 21–29.

Describes *C. Cleopatra*, *C. Mariana*, *C. Perdita*, *C. Hippolyta*, *C. Luciana*, *C. Cassandra* = 6 n. spp.; re-describes *C. Californica*, *C. Faustina*, *C. Irene*, *C. marmorata*, *C. Stretchii*, *C. Aholibah*, *C. Zoe*.

* 558. **H. EDWARDS.** Darlingtonia Californica. [San Francisco Evening] "Bulletin," Dec. 22, 1875.

Description of this plant, its botanical relations, its arrangement and action as a fly-trap, and a list of insects (5 Col., 3 Hym., 3 Orth., 3 Neur., 20 or more Dipt., 3 Lep., 4 Hem., 2 Arachn.) found in the pitchers; a spider (*Thomisus*? sp.), small dipterous larvæ (Tipulid?), a larger dipterous larva and a lepidopterous larva feed upon or in the pitchers.

* 559. **J. Traherne Moggridge.** Supplement to Harvesting Ants and Trap-door Spiders. With Specific Descriptions of the Spiders, by the Rev. O. Pickard-Cambridge. London, Reeve, 1874. pp. ? i–xii, 157–304, with eight plates (xiii–xx).

p. 198–210, pl. xv; p. 260–264. Describes and figures nest, eggs and imago of *Cteniza Californica* n. sp.; habits of the spider.

Proceedings of the Club.

§ 12. NOTES ON THE WHITE MOUNTAIN FAUNÆ. One of the characteristic features of this fauna, at the time of the meeting, was the abundance of the fly known as *Simulium molestum*. It was not known to any of the members present whether the bloodthirsty propensities of the species were manifested by the females alone or by both sexes indifferently; but the opinion expressed by one of the members was that the females alone drew blood, and that the males were not of frequent occurrence.

Syrphus torvus was noticed to be extremely abundant, a circumstance which the writer suggested might have some connection with the equal or greater abundance, especially at an earlier period, of a species of plant-louse (*Aphis*?), which infested the branches of birch-trees, and, according to the report of one of the members, who had been on the mountain earlier